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Ed. Service



REMARKS OF
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[REVERSING THE DECLINE IN AMERICAN PRODUCTIVITY]

I am very pleased to participate in the Second Annual Honeywell CAD/CAM Conference and discuss my views on productivity. I consider the productivity problem to be a major contributing factor to the economic problems facing this country. Our problems with inflation, unemployment, and international competitiveness have all been exacerbated by our productivity decline.

For a number of years now, the General Accounting Office has stressed the seriousness of the productivity problem and made recommendations for reversing its downward trend.

The country is becoming increasingly aware of the importance of this problem. Productivity is now the popular topic of newspaper and magazine articles and has been highlighted by the statements of numerous members of Congress and the President, as well as business and labor leaders. Many progressive businesses, such as Honeywell, have established productivity offices and focal points. Across the country there is a growing sensitivity to

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the fact that the United States is beginning to fall behind other industrial nations in the way we produce products and provide services, and that we must act to regain our productivity momentum.

Today I would like to share with you my perception of the productivity problem and what needs to be done by the public and private sectors to correct it.

Productivity is the ratio of output over input. This seemingly simple ratio is a central element in the growth of our economy. In the 25 year period from the end of World War II until 1970, our nation's productivity doubled. From 1948 to 1965, industrial productivity increased at an annual rate of 3.2 percent. Since the late sixties, however, our productivity performance has dramatically declined. From 1965 to 1973, productivity growth slowed to an annual rate of 2.3 percent and then to 0.9 percent from 1973 to 1978. In 1979, the productivity rate stopped growing and actually declined for the second time since 1947. Although we recently had a slight quarterly increase in productivity, the rate of growth is well below historical trends. We still have a long way to go.

As awareness of the problem has increased, we have not lacked explanations for the productivity decline. Some point to rising fuel costs, the changing composition of the labor force, the decline in the work ethic, and the preoccupation of business managers with short term gain at the expense of long term growth. Others point to excessive government regulations, tax laws that discourage capital formation and investment, the shift away from production to the service sector, or even

the fact that we are now a mature society and can no longer expect continued high productivity growth.

All of these explanations have some validity. We cannot, however, state precisely which ones are the key factors. Some of you may be familiar with Edward Denison's efforts to measure the factors behind our productivity decline. He was able to identify elements which explain only about 50% of the decline.

The problem of productivity is extraordinarily complex. We badly need a better understanding of the sources of the problem and of its broader consequences. Despite having only partial knowledge, however, it is possible to begin a course of action for improving the situation. Some things can--and should--be done now.

First, we must recognize that productivity will not take care of itself. Our productivity problem is national in scope and a national effort involving both the Government and the private sector will be necessary to solve it. The difficulties faced by the steel industry, the automobile industry, the shoe industry, and the textile industry have received widespread public attention.

Second, the Federal Government must demonstrate its commitment to productivity by organizing its existing productivity improvement programs more coherently and by working with the private sector to develop a national productivity plan.

There is of course much the private sector itself can do to improve productivity and product quality.

After the Second World War, U.S. products generally set the quality standard against which the rest of the world's

production was measured. Japanese products are now viewed by many as setting international quality standards. How did this occur?

Our loss of industrial competitiveness cannot be fully explained by differing labor costs or technological processes. We also cannot describe our market losses as being limited to only a few product lines such as steel, automobiles, televisions, apparel, and footwear. The list of product lines is long and growing. Further, I do not believe we can say that "dumping" has caused our market loss. Even if there have been cases of dumping, the market loss has been too pervasive, involves too many industries, and has been going on too long to accept it as an explanation.

I believe the most likely explanation is that in many instances we are being outperformed at our own game. The Japanese, for example, are simply applying management and industrial techniques largely developed in this country, and are highly concerned about productivity and product quality. As Peter Drucker has said, "What we can learn from foreign management is not what to do. What we can learn is to do it."

The General Accounting Office is now examining this issue at the request of the House Subcommittee on Trade. As part of that study, we recently conducted a roundtable discussion involving 15 top-level representatives from industry, labor, and academia. Several important points

were made at that meeting:

--First, labor and management must alter existing adversary relationships in order to successfully initiate productivity and quality efforts. This would include the use of such techniques as labor-management committees, productivity sharing, quality circles, and improved job stability.

--Second, additional capital must be made available for productive investment. In Japan and West Germany, for example, personal and corporate investment and savings are encouraged by exempting dividends and interest from taxable income. We should take a closer look at how our tax system can be used to increase capital formation through revised depreciation, capital gains, and corporate income taxes.

--Third, the Government should have a productivity focal point that will support increased cooperation among industry and Government and the coordination of Federal productivity efforts.

Another important topic that was brought up during the roundtable dealt with automation and robotics in the manufacturing process--a topic in which you have a special interest.

I believe that improvements in manufacturing technology will have a dramatic effect on productivity and product quality in this country. When a production process can be perfectly designed to yield a high quality product, and that process is automated, the result is the best of both worlds; high productivity and consistently high quality. Daily we have new examples to prove this point.

Robotics is at the cutting edge of industrial technology-- a technology developed in this country. The question that concerns me is why we have been slow to apply this technology. Japan now has about half of the world's industrial robots in use--twice as many as are in use in this country. It appears, however, that U.S. companies are beginning to recognize the crucial role robotics can play in improving productivity.

Some believe the increased application of robotics in this country may bring about the second industrial revolution. The first revolution involved the transfer of physical skills and strength from man to machine. The second revolution will involve the transfer of intelligence from man to machine. By definition, revolution entails radical change-- and change creates problems.

The problems fall into three categories: (1) technical problems in creating robots that can be flexible enough to handle varying tasks at a reasonable cost (2) cost problems in improving access to permit their widespread application, and (3) social and labor relations problems with integrating this new technology in the workplace. Much of the expected change will directly affect production workers.

Generally labor has not resisted automation and robotics when they have relieved workers from hazardous, dangerous, or monotonous jobs. But what will happen as the application of robotics goes beyond performing undesirable jobs? While we may end up with more jobs in the end, these will generally be new jobs with new training requirements. This fact must be addressed to ensure continued labor acceptance of the new technology.

The overriding factor in all the issues raised by our round-table session and our work in the productivity area is the need for cooperation and combined commitment on the part of industry, labor, and Government to improve our productivity.

This was also brought out in a GAO study entitled, "Manufacturing Technology--A Changing Challenge To Improved Productivity," in which we identified appropriate Federal policies and actions relating to manufacturing technology. The study emphasized the importance of computer-integrated technology in improving industrial productivity.

Although our national productivity largely depends on the performance of business, the Government plays an important role in establishing the broad economic, legal, and social framework within which business operates. The Government is also involved in the development of new technology.

For example, early development of the numerical control concept, which is the foundation of CAD/CAM, occurred in the U.S. Air Force. The Air Force developed this concept as a means to satisfy rigid tolerance requirements in the production of supersonic aircraft. Following demonstrations at MIT, the concept was applied to many other types of machine operations resulting in direct numerical control and later computer-aided manufacturing and design. Much of this research has been funded by the National Science Foundation.

In fiscal 1980, NSF provided over \$1.5 million in research funding for CAD/CAM, artificial intelligence, and related computer science work. NSF plans to continue funding research in these areas as well as in tactile sensing and vision needed for continued technology advances in computer integrated manufacturing.

The National Bureau of Standards has also been involved in fostering the continued development of computer integrated manufacturing.

The Bureau has been expanding its basic research program and is planning to build a specialized computer manufacturing research facility.

Through its Research Associates Program, it brings industry and Government researchers together to further the state of the art in various technologies, including CAD/CAM. The Bureau hopes that by the time its planned research facility is completed, they will have 50/50, public/private participation in its research program.

The Department of Defense has a Manufacturing Technology Program that dates back to the numerical control days. This effort is budgeted for about \$150 million, and covers 300 to 400 specific programs. Many of these programs are related to CAD/CAM development and application.

Despite this interdependence in technological development and economic strength, Government and the private sector seem at times to be more at odds and trusting each other less. In this we differ significantly from other industrial nations with high productivity rates; we appear to lack a spirit of cooperation between Government and the private sector. While the basic adversary relationship between the sectors will always exist, we must work toward building into this relationship a sense of trust and cooperation.

In the area of capital investment, there is evidence of an increased willingness on the part of the Government to work with the business community to address our national productivity problems. The passage of the Revenue Act of 1978 encouraged capital investment through a reduction in the corporate tax rates, improvement in the investment tax credit, and a reduction in the capital gains tax rate. At the present time, Congress is considering a major change in depreciation policy in an effort to encourage greater investment.

Other examples of public/private sector cooperation are more encouraging.

For example, just last month the Department of Commerce established the first Cooperative Technology Center. In this program, the Government acts as a catalyst in bringing together researchers in industry and academia to resolve common technological problems to help speed up the innovation process. The establishment of cooperative technology centers as non-profit corporations is the key mechanism in this program.

The recently established Detroit Cooperative Generic Technology Center is expected to provide advanced generic research on technologies that underly many industries. According to the Department of Commerce, the new center will combine improvements in materials forming operations with computer capabilities in the design and manufacture of products.

The Department of Energy has also established several cooperative projects which are showing promise toward improving coal extraction productivity. The Department and private companies are working together to develop a shaft boring machine which will impressively reduce the time required to bring a mine into production.

Another good example of growing public-private sector cooperation is the Steel Tripartite Committee. The Committee, which is composed of representatives from Federal departments, steel manufacturers and the United Steelworkers, was established in 1978. Working groups were established to address such productivity related issues as capital formation, trade, labor-management relations, and research and development. The Committee developed a series of recommendations for Government actions and many have been accepted.

I believe such cooperative efforts are in the right direction--and more are necessary. The Government, in brief, must show a better

appreciation of the importance of business to our economy and by helping business remain strong and finding ways to meet national objectives consistent with this need.

The private sector, in turn, must also be willing to work with the Government so public policy can be made with the insights of those the policies will affect.

With better cooperation between the public and private sectors, the Federal Government can do much to help improve national productivity. However, I believe the Government must first better organize and plan its productivity efforts.

Over the past decade, the Government has made several attempts to organize and direct Federal productivity efforts. The only common thread we can find running through these attempts is the lack of support they have received and their ineffectiveness. We at GAO have stated on numerous occasions that to be effective, any Federal effort to encourage productivity growth must have strong support from the President and the Congress as well as the private sector.

The current National Productivity Council was established in October, 1978, as an organization responsible for providing "coordinated and effective Federal programs to improve productivity..."

The Council is chaired by the Director of the Office of Management and Budget and is composed of the heads of 10 agencies that have productivity-related programs.

At the request of the Congress, we are now reviewing the Council's effectiveness. It appears that with minor exceptions, the Council has not met its charge.

The Council has not coordinated or guided the actions of Federal agencies to improve productivity, has not provided legislative or

administrative proposals for productivity improvement, and has not attempted to seek the advice and assistance of business, labor, and academic leaders concerned with productivity. For example:

--A recent GAO report found that the Council on Wage and Price Stability, a member of the Productivity Council, has not stressed productivity in its efforts to reduce inflation and was not encouraged by the National Productivity Council to do so.

--Another study of our's found that the Department of Labor, which was assigned certain leadership responsibilities for encouraging productivity growth through human resources, has done little to carry out this role or undertake new initiatives in the area of productivity and quality of working life.

--We have also found that while the Department of Commerce has developed new programs to encourage private sector productivity, they need to be part of a national strategy that incorporates the work of other agencies and the concerns of the private sector. The National Productivity Council has not been directly involved in the development of these programs.

Another problem with the Productivity Council is the part-time nature of its leadership. The issue of our Nation's productivity is sufficiently important to warrant the full time attention of those leading the effort. Importantly, it must have the support of labor, business, and the research community.

Despite these limitations, it cannot be denied that the Government outlays related to productivity improvement are substantial. According to a recent National Productivity Council estimate, about \$2 billion was spent by the Government during fiscal 1980 on productivity related programs. Most of these funds support activities

to improve civilian technology through applied research and development. Much of the remainder is used to fund private sector technical assistance programs and to improve human resources through skill training and better labor-management cooperation.

However, these numerous efforts have not been evaluated and are not part of a broader strategy. A national productivity plan, backed up by a strong council, is needed to harness and direct these funds and activities and ultimately improve productivity. Without a plan, how do we know what we are working toward? How do we know if \$1, \$2, or \$3 billion is an appropriate funding level? I find it difficult to understand that approximately \$2 billion is being spent annually in the area of productivity with no overall plan and no set objectives.

Exactly one year ago, GAO sent the Chairman of the Joint Economic Committee a report outlining what we believe is needed for an effective productivity effort. Legislation based on our recommendations was introduced in both the House and the Senate.

We pointed out that the key leverage point through which the Federal Government can improve private sector productivity is the implementation of policy initiatives in such areas as tax and regulatory policy. Of course numerous factors must be considered in deciding these policies. But most assuredly, a strong advocate of productivity concerns must be involved in that decisionmaking process. At present, there is no such strong advocate.

We recommended that a National Productivity council, with its own budget authorization, be established by law. As a statutory body rather than an organization established by executive order, the Council would have greater authority

and stability and would be more clearly accountable to the Congress.

We consider the development of a national productivity plan our most important recommendation. Such a plan should be developed with the extensive involvement of business, labor, and academic representatives as well as existing national and regional productivity centers. The productivity plan should

- identify and describe the relationship and effect of existing Federal policies, programs, and activities on private sector productivity;
- delineate clearly the responsibilities of Federal departments and agencies having direct program functions within the plan;
- identify existing unnecessary obstacles to productivity improvement created by the Federal Government;
- provide alternative policies, programs, activities, and lines of responsibility to improve private sector productivity; and
- contain a priority listing of short-and long-term objectives, and specific projects and programs for the next year to attain these objectives.

In addition, the plan should provide for

- an analysis of the Federal budget to document where Federal funds in support of private sector productivity improvement are being spent; and
- an assessment of Federal efforts during the past year to improve productivity, including an identification of gaps, duplicated efforts, successes, and failures.

The plan should be dynamic, and as such must be updated regularly. It should be used to guide the numerous Federal actions

to improve productivity, and would enable decisionmakers to put productivity-related proposals into a meaningful context. Without a plan, the Government must approach each productivity-related issue on an ad hoc basis.

I want to make clear what I mean by a productivity plan. I am not proposing that we initiate national economic planning and I certainly am not proposing that the Federal Government become more deeply involved in the economy. A productivity plan is needed to better manage the many Federal programs related to productivity.

Of course, the Government can provide only part of the answer to our productivity problem. The solution ultimately depends on the actions of businesses and workers. The private sector must do its part to make our industries more productive. Specifically, it is the management of an organization's resources that affects productivity. It is management, not economic laws or governments, that can make resources more productive.

For example, productivity statistics were recently calculated for 20 similar coal mines in Wyoming. Production, in terms of tons per worker day, ranged from 58 to 242. This wide variation in productivity was not the result of a different type of coal, differing capital equipment, or varying Government regulation. The main difference was how company management worked with its employees. The most productive firm provided its employees with the greatest amount of individual responsibility and involvement in decision-making.

However, there is also an important role for Government. Government must seek new and better ways to cooperate with the private sector to encourage productivity and eliminate barriers

to its improvement. The Government must also ensure that its own operations are efficiently administered.

In conclusion, I want to reemphasize my primary concern at the Federal level: That any national productivity effort be properly supported by the President and the Congress, involve the private sector, and be based on a national productivity plan. The goal of such a plan would be to make sense of the numerous Federal policies and programs that affect productivity, and direct needed changes toward encouraging productivity growth while meeting other policy objectives.

I sincerely hope that the apparent concern of numerous Members of Congress, the Administration, and the President-elect about productivity improvement can be translated into a program of commitment and action. Legislation has been introduced in the Congress which would attempt to achieve what I am advocating, and I hope it would have your support.

The private sector must also do its part. Labor and management must place a greater emphasis on productivity growth to ensure the long-term strength and competitiveness of our industries.

In summary, productivity growth has become a problem because it has been neglected. We have mistakenly believed that productivity would take care of itself. As I have said many times before, it is time we face up to the fact that productivity growth must be improved if we are to get inflation under control and maintain our standard of living. America's economic survival may well depend on our ability

to achieve this growth. We cannot afford to let our national productivity growth continue to decline.

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